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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,480	07/15/2003	Wolfgang Erdmann	4544/CIP of 4263	9282
21553	7590	03/02/2005	EXAMINER	
FASSE PATENT ATTORNEYS, P.A. P.O. BOX 726 HAMPDEN, ME 04444-0726			CHIESA, RICHARD L	
		ART UNIT		PAPER NUMBER
		1724		

DATE MAILED: 03/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/620,480	ERDMANN ET AL.	
	<b>Examiner</b> Richard L. Chiesa	<b>Art Unit</b> 1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 15 July 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. 09/603,854.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: ____.                                    |

**DETAILED ACTION*****Priority***

(1.) Applicants' claim for priority under 35 USC 119 is acknowledged. The priority papers have been filed and placed of record in parent case SN 09/603,854.

***Drawings***

(2.) The drawings filed on July 15, 2003 are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "A" has apparently been used to designate both an aircraft and airflow. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled Replacement Sheet in the page header (as per 37 CFR 1.84c) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicants will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

(3.) The specification is objected to for the following reasons: (A) The specification fails to indicate that parent case SN 10/017,491 is abandoned. (B) Reference character

"A" is apparently used to designate both the aircraft and airflow. Correction and/or clarification is required.

***Claim Rejections – 35 USC 102/103***

(4.) The following is a quotation of the appropriate paragraphs of 35 USC 102 that form the basis for the rejections under this section made in this Office action:

A person shall not be entitled to a patent unless--

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(5.) The following is a quotation of 35 USC 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(6.) This application currently names joint inventors. In considering patentability of the claims under 35 USC 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicants are advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not

commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 USC 103(c) and potential 35 USC 102(f) or (g) prior art under 35 USC 103(a).

(7.) Claim 1 is rejected under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over U.S. Patent No. 4,928,326 to Olin et al. Olin et al (note Figure 1) show an aircraft vacuum toilet system (note col. 2, lines 20-41) with a toilet bowl 1, waste valve 3, waste pipe 2, and a waste collection tank (note col. 3, lines 19-33) having an internal pressure lower than an air pressure prevailing in the toilet because it is under vacuum as claimed (35 USC 102b). It would appear that Olin et al may not actually state that the toilet system excludes all means of supplying a flushing liquid into the toilet bowl. However, Olin et al clearly show only air flushing (note col. 3, line 34 to col. 4, line 68) and do not disclose any use of flush liquid at all with their system and consequently it is inherent or at least would have been readily obvious to one of ordinary skill in the art (35 USC 103) that no liquid flushing is present in the Olin et al aircraft vacuum toilet system.

(8.) Claim 2 is rejected under 35 USC 103(a) as being unpatentable over Olin et al in view of U.S. Patent No. 5,245,711 to Oldfelt et al. Olin et al, as described above in paragraph 7, disclose an aircraft vacuum toilet apparatus substantially as claimed with the possible exception of an annular air jet gap nozzle. However, Oldfelt et al (note Figure 5, col. 1, lines 5-50) teach the well-known use of an annular air jet gap nozzle 306, 352 in an aircraft vacuum toilet system for the purpose of ensuring proper air flushing (note col. 8, line 43 to col. 10, line 38). Therefore, it would have been obvious to one having

ordinary skill in the art to employ an annular air jet gap nozzle in the Olin et al aircraft vacuum toilet device in order to facilitate air flushing as taught by Oldfelt et al.

(9.) Claims 3-8 are rejected under 35 USC 103(a) as being unpatentable over the prior art as applied to claim 2 in paragraph 8 above, and further in view of U.S. Patent No. 2,700,775 to Martin. The prior art, as described above in paragraph 8, discloses a toilet bowl system substantially as claimed with the apparent exception of a shroud and air plenum with a pressurized air source surrounding the toilet bowl. In any case, Martin (note Figures 1-7) teaches the well-known use of these expedients (note ref. num. 1, 17) in a toilet bowl system for the purpose of maximizing deodorization (note col. 1, lines 15-22). Therefore, it would have been obvious to one of ordinary skill in the art for this same reason to employ these expedients in the prior art toilet system.

(10.) Claims 9 and 10 are rejected under 35 USC 103(a) as being unpatentable over the prior art as applied to claim 2 in paragraph 8 above, and further in view of U.S. Patent No. 6,207,236 to Araki et al. The prior art, as described above in paragraph 8, discloses a toilet bowl system substantially as claimed with the exception of a nanocoating. Araki et al (note col. 9, lines 19-37; col. 16, lines 29-37; col. 20, lines 17-22; col. 25, lines 23-27; col. 37, lines 61-65; col. 41, lines 32-48; col. 68, lines 7-12) teach the use of a nanocoating in a toilet bowl system for the purpose of reducing adhesion. It would have been obvious to one of ordinary skill in the art to employ a nanocoating in the prior art toilet bowl system in order to reduce adhesion as taught by Araki et al.

(11.) Claims 11-13, and 18-22 are rejected under 35 USC 103(a) as being unpatentable over Olin et al in view of Araki et al. Olin et al, as described above in paragraph 7, disclose a toilet system substantially as claimed with the exception of a nanocoating. Araki et al teach the use of a nanocoating in a toilet system as described above in paragraph 10 and it would have been obvious to one of ordinary skill in the art to employ a nanocoating in the Olin et al toilet system for the same reasons discussed above in paragraph 10.

(12.) Claim 14, 23, and 24 are rejected under 35 USC 103(a) as being unpatentable over the prior art as applied to claim 13 in paragraph 11 above, and further in view of Oldfelt et al. The prior art, as described above in paragraph 11, discloses a toilet system substantially as claimed with the apparent exception of an air jet. Oldfelt et al teach the use of an air jet in a toilet system as discussed above in paragraph 8 and it would have been obvious to one of ordinary skill in the art to employ an air jet in the prior art toilet system for the same reasons explained above in paragraph 8.

(13.) Claims 15-17 are rejected under 35 USC 103(a) as being unpatentable over the prior art as applied to claim 14 in paragraph 12 above, and further in view of Martin. The prior art, as described above in paragraph 12, discloses a toilet system substantially as claimed with the apparent exception of a shroud. Martin teaches the use of a shroud in a toilet system as discussed above in paragraph 9 and it would have been obvious to one of ordinary skill in the art to employ a shroud in the prior art toilet system for the same reasons explained above in paragraph 9.

(14.) Claims 9-24 are also rejected under 35 USC 103(a) as being unpatentable over the prior art as applied to claims 9-24 above, and further in view of U.S. Patent No. 5,997,961 to Feng et al. The prior art as described above discloses a coated toilet system substantially as claimed with the possible exception of an explicit statement that the coating is at the nanometer level and has a wetting angle of 0° to 10°. Feng et al (note Figure 9 and col. 4, lines 51-65) teach the well-known use of either a microcoating or nanocoating and a wetting angle of 0° to 10° in a coating application for the purpose of reducing any fouling and for this same reason it would have been obvious to one of ordinary skill in the art to employ such expedients in any one of the prior art coated toilet applications discussed above.

### *Conclusion*

(15.) The prior art cited but not applied are considered pertinent to applicants' disclosure. These references have been cited as art of interest to show other toilet systems.

(16.) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard L. Chiesa whose telephone number is (571) 272-1154.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane S. Smith, can be reached at (571) 272-1166.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is (571) 272-0987.

Facsimile correspondence must be transmitted through (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard L. Chiesa  
February 28, 2005

*Richard L. Chiesa*  
**RICHARD L. CHIESA**  
**PRIMARY EXAMINER**  
**ART UNIT 1724**

*Feb. 28, 2005*